## **Claims**

1. A machine-based method comprising

in connection with a project in which a user generates a predictive model based on historical data about a system being modeled, the project including a series of user choice points and actions or parameter settings that govern the generation of the model based on rules, automatically storing information about the choice points and actions or rules.

- 2. The method of claim 1 in which the system comprises behavior of prospective or current customers of a vendor with respect to products or services offered by the vendor.
- 3. The method of claim 1 in which the predictive model predicts behavior of a prospective or current customer with respect to purchase of a product or service of a vendor.
- 4. The method of claim 1 in which the predictive model predicts behavior of a current customer with respect to retention of a current service or product of a vendor.
- 5. The method of claim 1 in which the predictive model predicts behavior of a current customer with respect to risk of asserting claims, loan payment or prepayment to a vendor.
- 6. The method of claim 1 in which the predictive model predicts behavior of a current customer with respect to usage of a current service or product of a vendor.
- 7. The method of claim 1 also including enabling a user to replicate information about the model as it existed as of the making of any one of the choices.
- 8. A machine-based method comprising

in connection with a project in which a user generates a predictive model based on historical data about a system being modeled, providing to the user through a graphical user interface a structured sequence of model generation activities to be followed, the sequence including sample dataset generation, variable transformation, dimension reduction, model generation, model process validation, model re-generation, and list scoring.

9. The method of claim 8 in which the system comprises behavior of prospective or current customers of a vendor with respect to products or services offered by the vendor.

- 10. The method of claim 8 in which the predictive model predicts behavior of a prospective or current customer with respect to purchase of a product or service of a vendor.
- 11. The method of claim 8 in which the predictive model predicts behavior of a current customer with respect to retention of a current service or product of a vendor.
- 12. The method of claim 8 in which the predictive model predicts behavior of a current customer with respect to risk of asserting claims, loan payment or prepayment to a vendor.
- 13. The method of claim 8 in which the predictive model predicts behavior of a current customer with respect to usage of a current service or product of a vendor.
- 14. The method of claim 8 in which the user interface controls staging of the sequence of model generation activities.
- 15. The method of claim 8 in which the at least some of the activities comprise model design choices including rule parameter settings to be made by the user and at least some of the choices are constrained based on characteristics of types of the historical data.
- 16. The method of claim 8 in which the data types are represented by metadata associated with the data.
- 17. The method of claim 8 in which the sequence of activities includes subsequences and the user interface controls staging of the subsequences.
- 18. The method of claim 8 in which the sequence is selected to produce an optimal model subject to constraints of the project goals.
- 19. A machine-based method comprising

in connection with a project in which a user generates a predictive model based on historical data about a system being modeled, imposing a structured sequence of model generation activities to be followed, each of the activities including choices to be made by the user, and

enabling the user to re-enter an earlier one of the activities and to adjust a choice made included in that activity, while continuing to impose the structured sequence on the activities to be followed.

- 20. The method of claim 19 in which the at least one of the activities which the user re-enters includes adjustment of a model generation parameter and review of results produced by the adjusted parameters.
- 21. The method of claim 20 in which the re-entry is performed iteratively.
- 22. A machine-based method comprising

in connection with a project in which a user generates a predictive model based on historical data about a commercial system being modeled, enabling the user to interact with a single integrated model generation platform to perform input processing of the data, generating of the model, and generating an output that identifies a selection, including rank by propensity, of the prospect or current customer data based on scoring of the data using the model.

- 23. The method of claim 22 also including encrypting the output.
- 24. A machine-based method comprising

in connection with a project in which a user generates a predictive model based on historical data about a system being modeled, providing to the user through a graphical user interface an indication of model generation activities to be followed in a sequence, each of the activities being indicated by an icon, the icons being connected by transitional graphical elements.

- 25. The method of claim 24 in which, at a given time, icons are displayed to indicate the status of one or more activities.
- 26. The method of claim 24 in which the transitional graphical elements are shown in one style for transitions that have been completed and in another style for transitions that are optional or are in process.
- 27. The method of claim 24 also including maintaining information about successive states and transitions of the model generation activities.